Utah Geological Survey
Water Resource Bulletin 29
Plate 6
2002

Orientations and Normalized Lengths of Joints in Selected Formations, Kamas-Coalville Region, Summit County, Utah

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MAP EXPLANATION

Contact

Faults, dashed where approximately located, dotted where concealed.

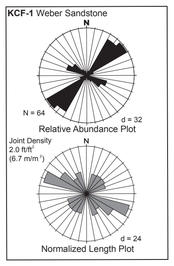
Thrust fault, sawteeth on upper plate.

Normal fault, ball and bar on downthrown side.

Sample Site -- see table C.1 for numerical data

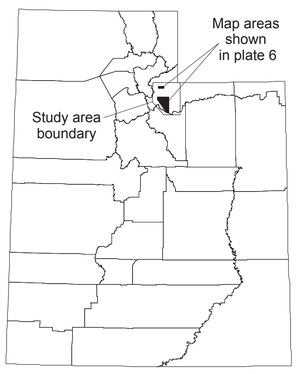
Map Units

Qs -- Quaternary sediments
Ti -- Tertiary intrusive rocks
Tvs -- Tertiary volcanic and sedimentary rocks
Tw -- Tertiary Wasatch Formation
uKs -- Upper Cretaceous sedimentary rocks
lKs -- Lower Cretacous sedimentary rocks
Js -- Jurassic sedimentary rocks
Trs -- Triassic sedimentary rocks
Pzs -- Paleozoic sedimentary rocks
Ptz -- Proterozoic sedimentary rocks



Equal-area rose diagrams (histograms) showing relative abundances and normalized lengths of joints at the corresponding sample site on the map. Tick lines are in 10-degree intervals. N is number of joints measured, and d is diameter of circle. Joint orientations are grouped into twenty four 15-degree sectors. The diagrams are bi-directional: joints with strikes 180 degrees apart (parallel strike directions but opposite dip directions) are treated as a single population. See appendix C and table C.1 for additional discussion of sampling, data reduction, and interpretation methods.

The circle diameter indicates the relative abundance or normalized length of joints in each sector. For example, at sample site KCF-1 shown here, the most abundant range of joint strikes is 45 to 60 degrees and 225 to 240 degrees (these two sectors are 180 degrees apart so strikes are parallel but dips are in the opposite direction), comprising just under 32 percent of the total population. In the normalized length plot, joints in the orientation ranges 105 to 155 and 285 to 300 degrees have the greatest normalized length (sum of joint lengths in that sector divided by sum of lengths of entire joint population), though the value of the diameter has no simple physical interpretation.



N

KILOMETERS 1 0 1 2 3 4 5
MILES 1 0 1 2 3
METERS 1000 0 5000
FEET 5000 0 10 000 20 000